

REMARKS

The Office Action mailed September 29, 2009, has been received and carefully considered. 1, 2, and 4-9 have been amended, and claim 3 has been cancelled. To the best of the undersigned attorney's information and belief, these changes contain no new matter for the reasons given in the remarks which follow.

Claims 1, and 4-7 are now active in the Application and are submitted to be in allowable condition. Claim 1 is independent.

Claims 8 and 9 have been withdrawn as non-elected in responding to a restriction requirement. When the Examiner finds the elected claims allowable, Applicants request that claims 8 and 9 be rejoined and examined in this Application since the speed reduction gear of claim 8 includes the composition of claim 1 and the electric power steering apparatus of claim 9 includes the speed reduction gear of claim 8.

Claim Changes and Support

Claim 1 has been amended to employ the transitional phrase "*consisting essentially of*" (M.P.E.P. §2111.03). Claim 1 has been amended to specify, "*a thickener that is a calcium sulfonate-based thickener comprised of calcium sulfonate and that is mixed into the lubricating base oil to prevent oil separation*", which finds support in paragraph [0010] of the specification. Claim 1 has been amended to specify, "*fine particles that are dispersed within the lubricating base oil*", which finds support in paragraph [0009] of the Specification. Claim 1 has been amended additionally to recite the features of claim 3 so that support is believed manifest.

I. The objection to claim 3 is moot in view of cancellation of claim 3.

Independent claim 1 has been amended to include the limitations of claim 3, but "gears" are recited in the preamble of claim 1 and in the body of the claim 1 so that antecedent basis is present.

II. The rejection of claims 1 and 3 under 35 U.S.C. §102(b) as anticipated by Oohira et al. (US 2003/0022797) is respectfully traversed in view of the amendments made herein to claim 1.

1. The invention of Oohira et al. relates to a solid composition having lubricity in which a lubricant is impregnated into the pores of spherical porous silica and the impregnated silica is mixed into a solid base material such as (a) a synthetic resin, (b) a material having rubber elasticity, or (c) a material that can be formed as a coating film.

2. The spherical porous silica of Oohira et al. has interconnected pores and the lubricant is impregnated into, i.e., inside of, the interconnected pores of the spherical porous silica (see, for example, Claims 2 and 3 of Oohira et al.).

3. It is therefore submitted to be clear that the spherical porous silica of Oohira et al. is not dispersed into a lubricating base oil, i.e., a liquid lubricant, unlike the particles of the present invention (see Applicants' Claim 1).

4. Furthermore, the calcium sulfonate, calcium carbonate, polyester fiber, and polyimide resin in Oohira et al. are mixed, not into the lubricant that is impregnated into the silica, but into the base material.

5. As a result, neither the calcium sulfonate nor the calcium carbonate can function as a thickener since they are not included within the lubricant that is impregnated into the interconnected pores of the silica. The calcium sulfonate and/or the calcium carbonate are mixed into the base material. This is believed clear from the disclosure of Oohira et al. read as a whole.

6. Furthermore, neither the polyester fiber nor the polyimide resin can function as buffer particles since they are not included within the lubricant that is impregnated into the interconnected pores of the silica. The polyester fiber and the polyimide resin are mixed into the base material. This is believed clear from the disclosure of Oohira et al. read as a whole.

7. More specifically, the calcium sulfonate in the composition of Oohira et al. functions as a corrosion-resistance agent, and the calcium carbonate, the polyester fiber, and the polyimide resin are all fillers added to the base material (see paragraphs [0075] and [0099] of Oohira et al.).

8. The lubricant composition recited in Applicants' Claim 1 includes no base material, but consists essentially of only the named ingredients, i.e., a lubricating base oil, a thickener that is a calcium sulfonate-based thickener, and fine particles. Applicants' lubricant composition has a grease-like form (see claim 7, the kinematic viscosity range).

9. In view of the foregoing distinctions, the lubricant composition according to Applicants' amended Claim 1 is not the same as that of Oohjra et al. so that the disclosure of Oohira et al. does not anticipate the present invention and this ground of rejection should be withdrawn.

10. Moreover, Applicant submits that one of ordinary skill in this art would find no teaching or suggestion in the disclosure of Oohira et al. which would lead or motivate the artisan to modify the composition of Oohira et al. in ways needed to meet Applicants' composition and the Examiner has given no line of reasoning for such a modification. In view of this, Applicants submit that the disclosure of Oohira et al. does not render obvious the present invention according to amended Claim 1.

III. The rejection of claims 1-7 under 35 U.S.C. §103(a) as unpatentably obvious over Nakatani et al. (US 2003/0176298) in view of Aoki et al. (US 5,354,487) is respectfully traversed in view of the amendments made to claim 1.

1. The Examiner acknowledges that the lubricant composition of Nakatani et al. does not comprise fine particles (see page 4, section 10, lines 3-6). The Examiner therefore relies on Aoki et al. for this teaching.

2. Applicants respectfully disagree.

3. Neither Nakatani et al. nor Aoki et al. teach or suggest that selective use of a thickener, particularly a calcium sulfonate-based thickener, can specifically prevent oil separation of a grease including fine particles, particularly when a large quantity of fine particles are include. Thus, Nakatani et al. and Aoki et al. simply correspond to the prior art of the present invention.

4. Although Aoki et al. teaches a solid lubricant, the solid lubricant of Aoki et al. is limited to only a fluorinated cured product resulting from cross linking vinyl bonds in a butadiene

polymer as defined in Aoki et al.'s Claim 1. As a result, no description is found in Aoki et al. with respect to a solid lubricant made of another material, such as a resin and/or a rubber.

5. The Examiner alleges that fine particles in Aoki et al are also formed of a thermoplastic resin. The Examiner supposedly bases his assertion on the description of Aoki et al. in Column 3, lines 45 to 60. However, Applicants respectfully disagree because Applicants believe the Examiner's position is not reasonable.

6. The description in the passage specified above is not drawn to a solid lubricant, but is only an example of the synthetic resin or the rubber defined in Claim 5 of Aoki et al. The invention according to Claim 5 of Aoki et al. relates to a composition having a solid lubricant contained in any one of a lubricating oil, a synthetic resin, or a rubber.

7. Moreover, Aoki et al. have no description of forming fine particles from the synthetic resin and the rubber, and containing the fine particles in the lubricating oil together with the solid lubricant. Indeed, Aoki et al. have no description of selectively using any of Applicants' features (a) through (c), defined in amended Claim 1 for the fine particles.

8. Still further, Aoki et al. have no description of adding a calcium sulfonate-based thickener to a lubricating oil containing a solid lubricant. Aoki et al. simply describes that a gelling agent may be added. From the disclosure of Nakatani et al., it appears that calcium sulfonate is known as a gelling agent, i.e., a thickener.

9. However, neither Aoki et al. nor Nakatani et al. describes that selective use of Applicants' calcium sulfonate-based thickener as a thickener can specifically prevent oil separation of a grease including large number of fine particles. Thus, Nakatani et al. and Aoki et al. simply correspond to the prior art of the present invention.

10. In view of the foregoing distinctions, Applicants respectfully submit that the combined disclosures of Nakatani et al. and Aoki et al. do not meet Applicants' independent Claim 1 as mended so that no *prima facie* case of obviousness is made out against independent Claim 1, as well as dependent claims 2-7 for analogous reasons, so that this ground of rejection should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that claims 1, 2, and 4-7 are in condition for allowance. Applicants therefore request that claims 8 and 9 be rejoined and examined in this Application since Applicants consider that claims 1-9 and the Application are in condition for allowance. Reconsideration and passage of this case to issue are therefore requested.

Should the Examiner consider that a conference would help to expedite the prosecution of this Application, the Examiner is invited to contact the undersigned to arrange for such an interview.

Request For Extension of Time

Applicants request a first extension of time for responding to the Office Action dated September 29, 2009. A first extension fee of \$130.00 is now due and this fee is submitted herewith in the attached credit card form PTO-2038. Should the remittance be accidentally missing or insufficient, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002 and is requested to advise us accordingly.

Respectfully submitted,



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January 29, 2010
Date

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